Instructor: Carl (Primary)

Question: How can this instructor improve?

Gave us specific guidelines for projects, helped outside of class regularly, was very fair about grades and welcomed student feedback

Very informative I learned a lot

The instructor always maintained a positive outlook

His instructions on the projects were clear.

The instructor always maintained a positive outlook

Very informative I learned a lot

Gave us specific guidelines for projects, helped outside of class regularly, was very fair about grades and welcomed student feedback

Question: What did this instructor do well?

1. Enhanced interest
2. Material presented in organized manner
3. Clear communication
4. Positive learning environment
5. Helpful feedback provided.
6. Supported my progress
7. Effective teacher

8. Regularly attended class

COS - Fair evaluation of work
COS - Consistent evaluation of work
COS - Timely evaluation of work
COS - Availability outside of class
COS - Helpful outside of class

Use of the MIT Open Courseware online lectures enhanced my learning in this class (Salvaggio)

Text Responses

The instructor was very passionate about the topic and was invested in helping to identify problems that came up throughout the course.

very knowledgeable

Carl is very enthusiastic about his work!

He helped and taught us a lot about programming and imaging science.

The projects required for this course were meaningful and educational. Additionally, Carl's undying enthusiasm and excitement for the material he teaches is down right refreshing. When I did go to ask for help directly from him, he was willing and able to do whatever he could to help me fix my code and learn what was wrong with it.

Very helpful, and kind

Carl was very specific about what he expected for each project and was readily available outside of class for help.

I think that for the most part, the projects were interesting, if a little too challenging for some of the first years. I think that the lectures we had to watch were really helpful, if a little boring.

He explained critical commands and their importance well. Very approachable, and nice guy. Good at coding.

I like his enthusiasm about the subject and his willingness to help outside of class.

He presented the subject in an interesting manner.

He went pretty slow through classes which was good.

His instructions on the projects were clear.

The instructor always maintained a positive outlook

Very informative I learned a lot

Gave us specific guidelines for projects, helped outside of class regularly, was very fair about grades and welcomed student feedback

Question: How can this instructor improve?
The required projects taught me almost 100% of what I learned from this course. As I said, they're very good, although some of them I felt were outliers in the learning curve, but I seemed to not actually pick up much from the class. Carl moves very fast, which I attribute to his enthusiasm for the material, so its hard to follow along and I ended up zoning out part way through the semester, letting the projects lead me through a google/TA fueled education.

Carl often went way too fast for me, I've never had any programming experience be for and often times I was completely lost at the end of class. sometimes he would show us something once then expect us to be experts in it the next day. We where also told to Google our questions which was difficult when you don't have a good idea what your doing I often didn't understand the answers I found.

be more clear and organized and learn to describe basics better and not solely rely on TA's to do everything

This class is not an appropriate class for first year students. While I am not a first year student, I believe that it is much to ask of first year students who have never programmed before to learn python while interfacing with hardware, the Linux terminal, and understanding imaging science theory. I do understand that this is a new course this year, but it is not tailored to individuals who have not (and have not been required to) yet learn computer science. With this being said, it would be helpful for the instructor to allow us to build hardware and test snippets of code in class with his help and the help of the four TAs who consistently attended class with us.

We cover a lot of material in a short time and it is easy to lose track

This class was poorly planned and the course outline was not given much thought. Assignments were put together on the fly and many people in the class experienced various hardware problems. The code that Carl prepared for class rarely worked and thus the class became known as trouble shooting with Carl. The professor did not engage the class and showed a marked disregard for the concerns of the students. Not much thought was given to this class and without the help of the TA's not a single person would have passed. Carl was always hard to find and rarely provided useful help for any of the students. The cost of the course was ridiculous as well. The kit required for the course costed $360. I had to pay additional money due to the fact that some of my components were defective on arrival, and there were no spares that I could access. Very poor class, very poor teaching, very poor hardware! I would not recommend this class to anyone!

Go through sample programs and projects step by step in class to introduce syntax. Maybe make projects or homework that asks to analyze programs instead of create them. I needed to learn Matlab for this class.

It would have helped to learn more syntax in the beginning. It seemed like it was not a freshman level course because of the way it was taught. Maybe some little exercises to understand how the syntax of python work.

Since this was new this semester, future times teaching the course will improve the teaching of the class.

In summary:
- Cover the fundamentals of coding including format and style;
- work within a syllabus;
- grading requirements should be listed if there are specific errors in the coding that are planned on being penalized;
- better time management, in class, in the syllabus and assignments;
- choose projects better suited for the class and what they are supposed to be preparing for (Blackbody was good and education of numpay was critical but efforts felt wasted on War and RANSAC);
- better preparation to enable more in class practice;
- I was engaged working with the TA's but future classes should list a class time lab or recitation in enrollment if they continue to be this dependent on them, hire TA's from GCCIS/CS who are well versed in theory of coding;
- if a special command is just as key as its implementation then both theory and application process should be taught;
- assignments that make jump between steps of instructions is normal but it shouldn't be policy to avoid explanation of a jump in logic between steps [to enable comprehension] in the excuse that this enables the completion of the assignment, this demonstrates a critical flaw in the design of the assignment;
- The class seems to be undecided if it wants to be an introduction to coding (which I felt it failed to do, the only one who did well survived baptism by fire) or a special topics class on coding for a Raspberry Pi to hardware interface. This class would have been better suited for a more experienced class that optioned for it as an elective rather than a required freshmen class. Unabridged rant: This class had many problems. This is an introduction to coding, however, the students were not given any teaching on coding itself, rather they were taught methods to accomplish the project objectives. Very often my classmates struggled to understand the how to code and not the implementation of what to code. However, as we progressed, we were graded more severely on our style and design of our codes despite having minimal education in this aspect of coding. His policy was that you will develop your own style but offered little foundation in fundamentals and technique to base of developing styles off of. In any other practice it would be easy to assume that many of these students, myself included are fostering bad habits obliviously. Its frustrating when the advice of the TA is to just suffer through it when you lack comprehension. This could easily be resolved with more time spent in class coding and working from a textbook or accredited source, and possibly hiring GCCS students to TA. Another aspect was that this was project based. The class seemed to operate on a poorly coordinated schedule, often leaving less than a week to write a code. It is common courtesy in my experience to give students a full week to work on any assignment in order to enable each student to accomplish this within a full schedule period. It is arrogance to assume that students are free outside of the class. On that note, if the class is to rely on TAs outside of the lecture, it is then still class time and thus should be part of the schedule. On all but one day I have classes during TA open hours and so when we need to be graded with TA participation outside of class and there is less than a week to do this, it was unavoidable that I could not meet these demands without skipping classes. On the projects themselves I had a few issues. The first was that projects would often rely on a specific command. However, some of these commands were complex and the simple explanation of google it when the sub-directories of the required command were not covered yet still necessary, is not only lazy instruction but also renders the importance of a professor moot. This also did not help in the class's comprehension of how to code as google can only define a code so much in the what. Once again, if one is going to rely on a specialized command it pays spend time in the application of it. The reasoning that if the teacher were to explain how to use it would give away how to do the homework is one of the laziest things I have heard a student. As an engineer and a scientist I know that it pays to be educated in the process just as much in the theory. A smaller problem was that many of these codes revolved around a more advanced subject. This is fine if not good as it previews application before comprehension. However, comprehension of the subject aside, on the later projects the background material was either excessively complex, limited, still required advanced subjects like Calculus and Physics (these are freshmen), copied from another class for a different languaga(a help page done in IDL), or not provided at all. If its going to be advanced it helps to either give the solution to the process or teach it if it is not too complex (vectors cross product). My other complaint was that these codes were not constructive to a learning environment with Python, in my opinion. A majority of the assignments revolved around completing desired methods within specific parameters, with a prewritten test harness. By this practice, we are not learning to code to a given goal but rather work around a desired format, equivocal to mimicking the teachers prewritten code. More or less we were not developing our own style but rather learning to imitate his. Worse is that in the testing of these codes the directions are vague and abstract leaving many opportunities for incorrect deductions between steps. This could have been easily resolved if not for the flaw that the these assignments are designed around these holes in logic as the explanation would give away the answer. This either means that the leap in logic is either relevant to the subject/method at hand or is a critical flaw that puts completion and success of the project in the probability of guessing how to appeal to the undeclared requirements. On grading alone, the TA's did a good job. However, the students were not given or instructed on the criteria of how they were being graded and when the class resolves around building codes around the teacher's design, it helps to know what the staff/grader is looking for. Other times, the depth and format of grading was inconsistent (projects being graded at a base 80; general intervals of Fail, 80, 100 which hinder grades; what defines failing (no submission, no output, error?)); The other was the tests which we had 15 minutes to analyze a code and decipher its output or write a code in such a time frame.

He did not seem to want to make this a class in imaging science or in programming. He tried too hard to make it neutral. He also did not seem to follow when we did not know certain topics. He assumed watching an MIT lecture meant we all learned all of the material in that lecture. There were plenty of things that we did not learn, and he just told us to make them. For example, we had to make a vector object, but the fact that half of us didn't know what a vector was did not seem to matter to him. He also went very fast through every lecture and covered much more material than we were prepared to learn.

In the beginning i felt that he was expecting us to come in with certain knowledge. Maybe start at a slightly lower level. other than that I enjoyed the class experience.

I think that maybe making sure all of the things he tries to do in class actually work so that there's less time trying to figure out why things aren't working, and more time learning. Also, making sure that the projects are double in the time allotted.
There were: 25 possible respondents.

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<th>Top Two</th>
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<table>
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<tr>
<th>Instructor</th>
<th>Text Responses</th>
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<tr>
<td>Salvaggio</td>
<td>Conveyed basic CS ideas.</td>
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<tr>
<td>Salvaggio</td>
<td>The instructor organized the course materials on his class website. He had everything from projects that were due to the exacts codes and examples we did in class. He also offers helpful links alongside each project, or at least for most of them.</td>
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<tr>
<td>Salvaggio</td>
<td>Good at diagnosing problems with software/hardware issues.</td>
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<td>Salvaggio</td>
<td>professor was nice</td>
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<tr>
<td>Salvaggio</td>
<td>Really well.</td>
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<td>Question: Online effectiveness</td>
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<td>--------------------------------</td>
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<tr>
<td>Salvaggio</td>
<td>N/A, no prerequisite courses taken yet.</td>
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<tr>
<td>Salvaggio</td>
<td>No prerequisite courses</td>
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<td>Salvaggio</td>
<td>I had no previous coding experience and this course went beyond my expectations of a beginner's course.</td>
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<tr>
<td>Salvaggio</td>
<td>This was my first CIS course, but I felt that from nothing, I was able to build up a firm understanding of the material</td>
</tr>
<tr>
<td>Salvaggio</td>
<td>n/a</td>
</tr>
<tr>
<td>Salvaggio</td>
<td>This course completely built my foundation in programming. Prior to taking this class I had no experience in programming and now I feel as if I have an extremely solid foundation in the python language.</td>
</tr>
<tr>
<td>Salvaggio</td>
<td>n/a</td>
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<tr>
<td>Salvaggio</td>
<td>This was my first CIS course, but I felt that from nothing, I was able to build up a firm understanding of the material</td>
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Definitely work more on coding syntax and how to integrate that into thought processes or flowchart logic. While the explanations were fairly clear, it was really hard to take notes in class that were understandable when I went to code the actual assignment outside of class.

While we are able to learn how to do each project from the knowledge we get from class and from the T.A’s, the overall scale and amount of projects was overwhelming at times.

More in class time for programming.

I would’ve liked a little bit more information on the basics of programming. The class sort of jumped right into coding, and I remember my first project was very difficult because I was unsure of what each part of a code even did. Eventually I understood, but that was several weeks into the class.

I understand the concept of problem solving when presented with an obstacle, but as a freshman introductory class, this was all sink or swim. One of the challenges that comes into play is when we're given examples using basic pre-algebra, having nothing to do with our assignment, and then our first assignment deals with physics. This could definitely qualify as a second semester class with a prerequisite to a true introductory to computing and control class. This is a more intermediate level class.

The lecture should actually contain explanations on what we're supposed to be doing outside of class more than about once a month.

He explains as if we would understand right away. He blames us for no asking questions when even 3-4 questions won't do any justice. He relies on teaching assistant hours to get your projects done. I wish that the material we learned this semester was paced better and more elaborate. The professor provides MIT lecture links and online help. Although we are encouraged to do our own research, I had to solely rely on those videos to move on in the class. But having help in person is so much better, which this professor did not really provide. He moved too quickly and gives everyone extensions on projects even though I started early, got help from TAs, and researched things on Google. I definitely feel that my grade doesn't reflect on the work and effort I put into the class.

In my opinion, the class was way too hard to be considered an introductory coding class. I found myself struggling really hard with completing projects even though I started early, got help from TAs, and researched things on Google. I definitely feel that my grade doesn't reflect on the work and effort I put into the class.

I don't feel as confident in coding s I had hoped to be

Unfortunately they weren't met. I was beyond passionate about undergoing this challenge, but the amount of information I retained was and still is minute.

I definitely gained a much better knowledge regarding coding, especially alongside hardware.

Going in I really didn't know what to expect, but I certainly feel like I got my money's worth out of all cis classes I took this semester.

Very well; they pushed my boundaries of learning in the best way possible.

I realized that in order to learn and apply the material, time management and coming into office hours for help was necessary for every project

I learned a lot from this class and it exceeded my expectations in regard to the amount of content I learned.

I hoped that I had some more introductory classes and I had to do a lot of learning on my own but it did teach me to learn on my own.

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### Fall 2015, IMGS 180 Intro to Computing and Control Section 1
Instructor: Salvaggio, Carl (Primary)

There were: 35 possible respondents.

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Some what effective. This was the only class of mine to use MyCourses, but that was only when The TAs remembered to grade things.

I did not use it.

We watched MIT lectures and they were very helpful.

I really liked Carl's website, it was easily navigable and he included everything necessary. He also utilized mycourses well for recording the grades.

Not used.

It built significantly on any previous work/classes involving Python and that's all.

It was a first year level course, but I don't think I learned anything. Came in with no coding experience, still don't really know how to code.

This course was one of my first courses, so it could not really build on anything because there was nothing to begin with. I did learn a lot about CIS material... however my objection to this is that the class focus too much on the CIS material and not enough on the BASIC FUNDAMENTALS and practices of all programming languages.

Topics from Trig and Calculus like summations and integrals but other than that the material was too complex.

This was my first CIS course other than FIP. Some of the conceptual topics covered in 180 were also used in the project, not the coding concepts.

Questions:

In what ways

I had no previous knowledge of what was covered in this course.

basically all new material

More clear understanding of python.

There were no prerequisite courses.

There were no prerequisites to this course.

Programs for this class will be used in future classes.

The math courses were really helpful in this class.

none

I didn't have any courses like this until now, so this course was meant to introduce me, which it didn't do very well.

I have not taken any previous courses as I am a Freshman.

This was an into class, I had no experience

It didn't (first year)

This was a brand new experience for me. I have never coded before. I was not impressed, I wanted to like coding but this was in no way an introductory course for coding. Arguably my hardest class. Could not do projects effectively without help from the TAs.

Topics from Trig and Calculus like summations and integrals but other than that the material was too complex.

This was my first CIS course other than FIP. Some of the conceptual topics covered in 180 were also used in the project, not the coding concepts.

It didn't

It built significantly on any previous work/classes involving Python and that's all.

It was a first year level course, but I don't think I learned anything. Came in with no coding experience, still don't really know how to code.

It doesn't relate to anything else I've done honestly

N/A

This course was one of my first courses, so it could not really build on anything because there was nothing to begin with. I did learn a lot about CIS material... however my objection to this is that the class focus too much on the CIS material and not enough on the BASIC FUNDAMENTALS and practices of all programming languages.

It really didn't

This course was dissatisfactory.

In what ways

not used

not used

Not used.

Not used

I really liked Carl's website, it was easily navigable and he included everything necessary. He also utilized mycourses well for recording the grades.

We watched MIT lectures and they were very helpful.

N/A

not used?

I did not use it.

If by class recording, you mean MyCourses, then it has not been used regularly by the TA's to update grades often at all.

Not used

not used

N/A

Some what effective. This was the only class of mine to use MyCourses, but that was only when The TAs remembered to grade things.
Intro to Computing was meant to introduce me to programming and soldering and things of that nature. However, in reality this course just threw project after project at me without giving me a sufficient understanding of what was going on. There was never enough time to figure out what I was doing, I just had to hand it in. The Teacher's Assistants were the ones who helped me through. I would work for this code almost every day and half the time it wouldn't pay off. The TA's could only get me so far, and on certain days the TA room is overflowing with students in my same position. On those days I would spend hours waiting for help and end up getting nothing done. The past fourteen weeks have been so stressful because every second I wasn't working on another class I had to find a way to get to the TAs. I don't know how they expected us to do this on our own without prior experience in python. This course was so time consuming that it affected my other grades. The online MIT course we watched for homework did not help me learn more. The Innovative Freshman Experience, on the other hand, has been an extremely positive experience. At first it seemed incredibly overwhelming but as the weeks went on, all the students got a better understanding of what was happening, and what had to be done. The fact that the professors leave us mostly on our own to create a system that doesn't even exist is incredible. The atmosphere in the class is drastically different than any other because we are all working together as a team, not just a class. That is something that I will learn from no matter what field I go into. This is a course I tell people about at home and they are amazed.

Intro to Computing and Control was a disappointing class, to be honest. It was meant to be an introductory class with regards to Python and integration with hardware. I came in with an intermediate knowledge of Python and a basic knowledge regarding hardware and I was completely lost at least 75% of the time in this class. The projects were ridiculous for an introductory course. much harder than I thought it would have been for an into class

they were challenging and rewarding

This course did not meet my expectations by a long shot, it was far too complex for an intro coding class and the teachers is disillusioned as to what it means to be a novice coder.

Poorly. Extremely poorly. I wanted to like coding, but this was so far and beyond the scope of an introductory coding class that I am biased to dislike it now.

This class specifically: not at all. It's been extremely difficult to learn in this class due to the high expectations of previous experience (which I even had) and how fast the professor taught. It was hard to understand him most of the time and though my grade has stayed fairly high, I have struggled to comprehend the material (almost of this class would have failed out if the TAs didn't help us). In terms of other courses, the freshman imaging lab has been an interesting and extremely education experience.

I expected to have a better baseline knowledge of a programming language however I don't feel confident in my knowledge even after taking this class.

It didn't.

This course was extremely disappointing. Upon entering the course, I was excited to learn about the fundamentals of computer programming and the python language. Because I had no prior experience in the world of computer science, I was happy that I was able to take an introductory course that applied the basics of python to the types of applications that I will be using in Imaging Science. Unfortunately for me, this was nothing like an introductory course. The fundamentals and basics of python were covered in one project, and it wasn't even the first one that we did. The projects done in the course were very advanced in terms of the levels of object-oriented programming and were extremely overwhelming for someone with no background whatsoever in the subject. Due to this, I had to see the class teacher's assistants almost daily to try and grasp an understanding of the projects that I was being asked to complete for class. This resulted in me not being able to hold a firm grasp on the material and struggle greatly throughout the semester. Despite struggling, I thought that I would at least be able to gain experience working with projects that correspond to Imaging Science. Well, it proved that I was wrong here too. Not until the very end of the semester did the class begin to cover the materials that we will be working with in our major. The rest of the projects covered various topic that would be better associated with electrical engineering. These hardware-intensive projects did not prove to be useful in my learning and the only real reason that we needed to buy both a Raspberry Pi and the other materials that came with the kit. This course was overall very dissatisfying and, worst of all, the immense amount of effort I put into it did not give me the result I wanted: to have an understanding of python. This will likely be a problem for me moving forward.
For me personally, the class was very effective. I have already had a lot of experience with programming so I was learning more about its applications in the CIS course field. However, from my perspective as an above average programmer, this course is extremely difficult and fast paced for those who have had no experience (especially if imaging science material is trying to be taught simultaneously).

Exceeded my expectations

I was very dissatisfied with this class the pace was much too fast for any of the students to comprehend the work. I was in the class to learn the basics after all this is supposed to be an intro class. This was far too much for any freshman going through this process.

Question: Suggestions for improvement

I think it should be more like a DIP-light class that teaches programming principles

I think that there needs to be more time to cover the topics that were taught in class, because even though the projects got done, that doesn't mean that I will be able to do them again.

The class is Tuesdays and Thursdays. it would be nice to do like Tuesday class 1.5 hrs the Thursdays class 2 hours and that would be a lab where the teacher or TA would step by step walk through how to program. it would be nice to have homework assignments that are basically some of these projects where you walk through step by step how to do things like in a lab format and then the homework would be to complete the code or make a new method etc. then the bigger assignments (like war and the car) would be a project where we do those on our own

Need more clear on the concept. Some of the stuffs we know how to do it, but don't know why we do it.

have clear rubrics posted ahead of time

I would recommend making this a two semester class. We really need a class that simply teaches coding, and then another class to teach us foundation codes for the rest of the imsci and mps codes we will have to write.

Going over more of the basics of the language and the concepts of using a programming language.

I don't think he knows how to teach beginners well. A lot was thrown at us in the first couple of weeks, and it never sank in because I had absolutely no prior knowledge of programming. I wish we had a rubric to know what specifically we did wrong on assignments.

Define better the class material a the beginning and also have a rubric before assigning projects.

Please go slower. When your son took over for only one week, I got lost in the class. I have not been able catch up and the TAs were of no help. Also, please don't leave everything for the TAs to teach be every time I went, during the week they were swamped or not helpful. Also, the TA's schedules always conflicted with classes. i found myself having to skip math to get help. Also, don't treat the class like an intermediate class. Maybe there should actually be a quiz on some of the short code. I feel like that would help a lot.

Intro to Computing needs to be changed. Coding and hardware projects are extremely complicated especially for those who are new to the topic. The course needs to slow down and give smaller assignments before heading into big projects. Start simple to introduce us to the topic, as the title of the course suggests.

Watching the online MIT courses for homework does not fill-in for actual teaching and should not be used as an excuse to say we know what we're doing.

I would have to say that the projects need to be fine-tuned and the TA's need to have knowledge of how to solve them as well, because even they were occasionally lost. The entire course needs to be re-evaluated, I believe, as this is a poor excuse for an introductory course. Many students did not know even the basics of Python (implementation or syntax) by the end of this course.

it would be better if they were more introductory. i felt like i was thrown into the course not learning the basics i needed.

Slow down the course significantly, have more hands of walk through for the first few weeks; or move this class into a later year and have an actual Computer Science intro coding class take its place or something because this was extremely hard.

I don't have the time or patience to list out all that is wrong with this course so I'll keep this brief. The course assumes prior knowledge to coding when it's an intro course. Basic syntax is not taught in class. The teacher struggles with hardware and software issues from the tech he requires his students to use in class. When I approached him about my hardware not being able to connect wirelessly, a requirement to complete a project, he didn't know how to fix the issue and basically dismissed me, giving me no leniency during grading.

The lectures would have been better if they were geared toward syntax rather than radiometry basics. Since this was supposed to be an intro class, it would have been better to teach us foundations as if the majority had never programmed before. My suggestions would be to start at a more basic level and then have the projects build from there.

This is an introductory course. We should be learning the syntax and developing an understanding of how the syntax operates. Instead of assuming that most students knew what they were doing, the instructor should have assumed that none of the students knew anything about programming, because this is, after all, an introductory course.

In terms of lectures, the professor needs to slow down and teach the basics first (if this going to be an intro class for first year students), instead of relying on worthless, confusing online lectures taught by someone else. In terms of content, the professor needs to stop assuming students understand everything he's saying, most of us are first years and even more have absolutely no experience with Python or programming. Most of the codes we are forced to write are poorly explained, with little more than a brief description online which we are then expected to know how to make into a code without any in class explanation. Not to mention, he does none of his own grading and the TAs' grading has caused numerous problems that have then been fixed when the professor re-evaluates the grade. He claims to have an open door policy when in fact most students in the class can never find him. He's very helpful when he can be found and great at explaining things to the individual, but his lectures need work.

I couldn't understand the material conceptually because I hadn't taken those classes before. I didn't know how to code, and I didn't know how to code stuff I didn't understand. Areas for improvement include: Teaching syntax, teaching basic coding, having basic coding assignments to help understand coding, slowly integrating imaging material. It is supposed to be Intro to Computing and Control

Do more in class practice

I do not see any need for the Control part of the course. There were no real applications for the hardware and programs done to satisfy this section of the course. Plus, it does not seem like any of the projects done with the Control aspect have any relevance towards image processing, or at least the majority of it. There were two types of lectures for this class: the lecture done during the class period and the online MIT lectures assigned for homework. Out of the series of 16 videos, only the first five or so of the MIT lectures proved to be valuable to the course material. All of the other lectures went way off track from where we were with the class and only helped boost my final grade. The in-class lectures were hit or miss in that the material was either presented clearly enough to understand, or it was presented with the intent of us not being able to fully understand the tasks at hand. The biggest issue with the course is that it goes through the basics way too quickly for anyone to gain a proper understanding of them so that they could be applied to the projects. A simpler curriculum would help students move into more advanced projects easier.
Salvaggio knew the basics of programming when some of the class didn't. I knew no programming going into this class and many of the concepts that we covered I don't think were explained fully. I was like he assumed we already explain the materials.

am doing. The semester classes were introduce; and I think by now at the end of the semester I think I sort of know how to create a class on my own and understand what I

introduce to this whole new concept and yet we need to move on to more difficult programming things and projects that require loops. like at the beginning of

automatically indent for you but if it did not then hit tab and type...etc making loops are very difficult because we don't think that way, we are just being

in one class period it would be there for half the class then not the other. It would be helpful to see more type this line 'for X in Y:' then hit enter and it should

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in one class period it would be there for half the class then not the other. It would be helpful to see more type this line 'for X in Y:' then hit enter and it should

though and willing to work with you if you are struggling.

The instructor always had a positive affect and always was interested in what he was teaching, cared about what he was teaching.

He needs to explain topics more and make sure that we understand what we are doing. Because I had absolutely no idea what I was doing for most of the

semester.

The online lecture summaries were too much. I get why we have to write a summary of the lecture; but I think a bulleted list would work better. It's a little
easier to do and understand. Some of these project were really difficult! Like not only are we learning everything programming, but also everything color

science too. The war simulation was a good solid project to teach programming, temperature emissivity not so much. It is very difficult to learn the concept and

apply it to coding. I would have liked to see more 'step by step' instructions. it is odd because usually professors will start out like that and drop it a few weeks

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am doing.

Explain the materials.

I knew no programming going into this class and many of the concepts that we covered I don't think were explained fully. I was like he assumed we already

knew the basics of programming when some of the class didn't.

Nothing really needed to improve.
Carl is so good at what he does that I feel he sometimes can't dumb the coding down enough for us, because it just makes so much sense to him. I feel that the entire course was very fast paced, and we simply did not have enough time to do all of the codes that we did and do them well, and he even had intended to try and do more. I think that a better understanding of python at the beginning of the semester would have made this a very helpful course, but it's not a first year first semester course, it's just too complex. That is not to say Carl is a bad professor, I really like him and plan on coming to him for help in the future. I just think that the course could use 1. more time and 2. some redesigning.

Having a rubric before the projects been assigned would help. Also, having more available info on course material. I know we can find the commands on the internet but there are too many ways to do the same, so maybe having more prepared material made by the professor in order to complete the projects would made the learning faster and easier; and also leave the TAs for more difficult problems because a lot of students went to TAs hours without even an idea of how to start the project.

He crammed a lot. For the last week of classes, when everything else is also due, he assigned two projects to be due and gave us information about them only a week prior. Because of that, the TA's weighed heavily in achieving a high grade. One in particular effectively told us how to program one of the assignments, and the way he wrote it received full credit in past years. However, it was too late because it was due when Carl found out the way we'd been writing out program, and told us we wouldn't receive credit for that part. A lot of us were up in arms about it, and Carl refused to subside. Because he was out of sync with the TA's, and distributed varying grades to past students, most of us lost unnecessary points. To continue, Carl doesn't know how to teach beginners well. A lot was thrown at us and we relied heavily on the TA's assistance. Without the TAs, I wouldn't have passed.

Please go slower. When your son took over for only one week, I got lost in the class. I have not been able catch up and the TAs were of no help. Also, please don't leave everything for the TAs to teach be every time I went, during the week they were swamped or not helpful. Also, the TA's schedules always conflicted with classes, i found myself having to skip math to get help. Also, don't treat the class like an intermediate class. Maybe there should actually be a quiz on some of the short code. I feel like that would help a lot, actually recording the class and posting it online might actually be really beneficial.

He needs to make sure we know the information he moves on and gives us our next project. Sometimes we are all busy with one project and he assigns another. There needs to be less projects or they need to be simpler so we can learn more easily with them. He also needs to be available for help more often. When there is a problem that the TAs can't solve, we need Carl to help. Sometimes he just doesn't answer the door when we know he's in there. He doesn't seem to care too much about how tough the course is on us, because it's all very easy for him.

TA's did all of the grading, some assignment I would get back in a week and some almost a month after they were turned in.

This instructor should understand that he is teaching to beginners because this is an introductory course. He expected way too much, way too fast from the students and seemed surprised when students were unable to complete assignments or when they were not knowledgable of the basics of Python that he neglected to go over.

He taught the material in a way that suggested he knew it extremely deeply but didn't communicate it in a way that helped students who are new at computing understand it. I felt lost after the first few weeks because I didn't know the foundation of some of the concepts.

Take a good long evaluation of his projects, scrap the more complicated ones and develop projects that express actual understanding the fundamentals of coding.

Slow down the class, a lot. This is an intro class, not a junior year course. Carl was also very hard to find, the TAs have designated office hours sure, but Carl is rarely anchored down in his office for more than 20 minutes at a time which makes asking him in person questions outside of class very difficult.

Hello It’s me And I was wondering if after all these codes you’d like to meet To go over everything They say time’s supposed to be abundant But I ain’t getting much sleep Hello, are you there, Carl? I’m in Carlson dreaming about who I used to be When I was younger and got sleep I’ve forgotten how I felt before the codes ruined everything There’s a difference in our knowledge and a million years Hello the other side I must have emailed a thousand times To tell you I’m sorry, but I do not understand But when I stop by you never seem to be home Death to the Raspi At least you can see that I’ve tried To show you I’m not sorry, for killing the pi But it don’t matter it clearly doesn’t tear you apart at all Hello, how are you? It’s so typical for me to ask for help I’m sorry I hope you’re done Did you ever finish blackbody_fit.py It’s no secret that the both of us Are running out of time Good-bye Hello from the other side I must have knocked a thousand times To try to see if you’d answer your door But when I knock you never seem to be there Hello from the outside At least I can say that I’ve tried To finish this hilariously bad code But it don’t matter it clearly doesn’t tear me apart (I give up) So I quit learning syntax! I tried studying numpy And to understand what I’m actually doing But when I run the code, errors occur Hello from the other side Is it that obvious that I cried While working on all of these codes Because now I'm done with this course (no more code)

He could make a schedule for office hours instead of expecting the student to know when he might be in his office. He could slow down his lectures and make sure everyone is following along instead of going so fast that no one can keep up (I have seen most people asleep, playing computers games, and messing with phones during his lectures). He could grade SOME of the codes he assigns, or at least check the TA grading, so that students are graded fairly (different TAs grade differently). He could lower his expectations in terms of student experience with Python.

Being clearer on the requirements for projects. There were aspects of the project that were never discussed but they were on the rubric and we had points taken off for not including them. Also, having regular office hours like the TAs so that we aren't searching CIS. Finally, being consistent on grading the projects and do more. I think that a better understanding of python at the beginning of the semester would have made this a very helpful course, but it's not a first year first semester course, it's just too complex. That is not to say Carl is a bad professor, I really like him and plan on coming to him for help in the future. I just think that the course could use 1. more time and 2. some redesigning.

This instructor can come up with a better method of making sure his students are getting the knowledge they need. Making sure he is not overlooking his students in class. Also taking into account an adequate time for each of his assignments.